

AMENDMENTS TO THE SPECIFICATION

Page 1, line 4, before this line and after the title insert the following paragraph heading:

FIELD AND BACKGROUND OF THE INVENTION

Page 1, line 30, before this line insert the following paragraph heading:

SUMMARY OF THE INVENTION

Page 1, please replace the paragraph beginning at line 36 with the following rewritten paragraph:

This object is achieved first and foremost in the case of an inhaler with the features set forth in the claims of Claim 1, it being provided that a component of the suction air stream lying in the direction in which the dosing chamber extends empties the dosing chamber.

Page 2, please replace the paragraph beginning at line 23 with the following rewritten paragraph and paragraph heading:

~~The subject matters of the further claims are explained below with reference to the subject matter of Claim 1, but may also be of importance in their independent formulation. For instance, it is further proposed that~~With respect to further features of the invention the dosing chamber is configured as a transverse bore of a spindle which can be displaced in dependence on a closure cap. In this way, the ready-to-discharge position is as it were automatically brought about, simply by the customary handling of closing and opening taking place. The preferably continuous transverse bore can be cleared out from two sides. A particularly effective measure is obtained by a conical transverse bore. The apportioned amount of substance is transferred even more quickly via the component of the suction air stream from the widening end. To achieve conducting of the air of the component in the direction in which the dosing chamber extends, it is of significance that an air passage adjoining the suction air stream is associated with the dosing chamber. This produces as it were a localized zone of reduced pressure. It is advantageous for an air passage to be respectively provided upstream of each of the two openings of the dosing chamber. In the case of the conical transverse bore, it is suitable also to provide that associated with the larger clear diameter end of the dosing chamber is an air passage of a smaller diameter than it and associated with the smaller clear diameter end is an air passage of a larger diameter than it. As a result of greater reduced pressure, substance is therefore cleared predominantly from the widening side, that is specifically in the direction in which there is no frictional hindrance as a result of the correspondingly widening walls of the dosing chamber. The

invention then proposes that the air passages are formed on a cup-shaped rotary part guiding the spindle and are in flow communication with air inlets in the lateral wall of a mouthpiece. The corresponding air inlets are disposed on the lateral wall of the inhaler in such a way that they cannot be kept closed either by the user's lips or by the gripping hand holding the stick-shaped body of the inhaler. The risk of them being kept closed is minimized moreover by a number of air inlets that are spaced apart from one another being formed. For the purpose of good distribution of the powdery substance in the suction air stream, it is also provided that the air passages are disposed axially offset in relation to the air inlets lying closer to the mouthpiece. This produces an initially contracting flow path. Furthermore, it proves to be advantageous for the rotary part to form with its cup base the top of the storage chamber, the center of which has a guiding opening for the spindle acting as a plunger slide. In this way, the cup base is given a dual function: indirect or direct cover and guiding hole for the spindle. Another advantageous feature is for the spindle, which is pointed at the end in the plunging direction in the manner of a screwdriver blade, to be rotationally connected to the rotary part by means of radial fins. On the one hand, the knife-like blade achieved in this way not only brings about an effective rotationally loosening action in the central region but at the same time also helps the spindle to plunge into the mass of powder, and on the other hand it provides welcome support for the spindle with respect to the rotary part, and what is more makes it possible for the alignment of the air passages with the dosing chamber to be retained. The necessary relative linear

movement of the spindle and the rotary part in relation to each other is achieved by simple means, in that the cup wall of the cup-shaped rotary part has axial guiding slots in which the fins are guided. This solution is further characterized by an extension limiting stop of the spindle that is provided by the mouthpiece, defining the ready-to-empty position of the dosing chamber, which with its base wall portion provides the transfer point. The closure-cap dependent mounting of the spindle is further characterized by a docking point between the spindle and the closure cap that lies on the mouthpiece side and disengages if overloaded. When the inhaler is closed again, renewed docking between the spindle and the closure cap is conversely obtained. A configuration that is even of independent significance is then embodied by the fact that the rotary part has a rotor with which a stator is associated, with a scooping effect acting so as to carry substance into the dosing chamber when the rotary part is reversed in its rotation. By this means, the replenishment and density of the amount of powder in the dosing chamber can be kept consistent. In addition to this there is a loosening effect in the surrounding area, which rules out the chance of parts of the powder becoming clogged. Reversed rotation means unscrewing of the closure cap and the accompanying charging action of the, or on the, dosing chamber. To be specific, the scoop assembly is formed by web-carried rotor blades extending from an annular disk of the base of the rotary part. Said blades have a lancet- or sickle-shaped outline. Two rotor blades lying diametrically opposite each other are realized. As far as the actual structure is concerned, it is also provided that the rotor blades extend substantially on a quarter sector, with a flank directed radially

toward the center of the spindle and a blade flank lying approximately at right angles thereto in tangential alignment with the spindle in such a way as to leave a gap. This rules out points of excessive compression. The medical substance adhering for example to a carrier is not rubbed off from it. It is then provided that the flanks lie in a common diametral line. The further structural features are also conducive to the scooping action but do not adversely effect the medicament, in that the rotor engages under the stator in such a way that the stator is formed as a projection protruding radially inward from the inside wall of the storage chamber and extending freely into a rotational path of the rotor. The stator has a trapezoidal outline and is rooted with its base in the inside wall of the storage chamber. The rotational path is axially limited by the underside of the annular disk of the rotary part and the inner side of the rotor blades facing it. Furthermore, a configuration that is advantageous in terms of the association between parts consists in that the stator lies in outline beneath the quarter sector, leaving an interspace between two rotor blades. This produces an adequately large mounting opening. It is advantageous both in terms of sealing and in terms of guidance if the guiding opening within the rotary part is lined by a sealing bush enclosing the cylindrical portion of the spindle. It may comprise rubber or rubber-like material. Powdery substance deposited on the stem of the spindle is wiped off by the sealing bush. There is no falsification of the dose ready to be discharged. A likewise sealing-related measure of the dispenser mechanism is obtained by a sealing ring inserted with preloading between the inside wall of the storage chamber and the rotary

part. Here, too, rubber or rubber-like material may be used. It is then provided that the sealing ring is snap-fitted in annular grooves of both parts, the annular groove located on the rotary part taking the form of a V-shaped notched groove and the annular groove of the storage chamber, lying at the same height as said notched groove, being of a semicircular form. The said notched groove is involved in the rotational guidance of the rotary part. Finally, it is proposed that the closure cap is formed as a screw cap and interacts with the mouthpiece via co-rotating means. The latter are similar to a claw coupling and disengage when there is a separation of the threads.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Page 7, line 16 before this line insert the following paragraph heading:

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT(S)

Page 9, please replace the paragraph beginning at line 5 with the following rewritten paragraph:

The cup edge of the pressure-exerting base 13 provides an annular lip 19, which on account of its rubber-elastic material wipes off the wall of the storage chamber [[21]] 11 without any substance being lost.

Page 13, please replace the paragraph beginning at line 20 with the following rewritten paragraph:

As Figures 1 and 4 reveal, the co-rotation between the mouthpiece 3 and the closure cap 4, lifting off by an unscrewing action, takes place by a claw coupling 44 between the two. This comprises a longitudinal toothing 45 on the lateral wall 37 of the mouthpiece 3, which longitudinal toothing engages in corresponding tooth gaps 46 on the inner side of the closure cap [[43]] 4.

Page 16, please replace the paragraph beginning at line 1 with the following rewritten paragraph:

There is also no entrainment of powder material that may be adhering to the lateral surface of the spindle, as a result of the guiding opening 24 with a wiping-off effect. Said opening is not formed directly by the rotary part 22, but by a sealing bush 56 lining this passage. Said sealing bush consists of rubber-elastic material and is held by being clipped into the top 23 by latching means 57. In terms of its plane, it reaches ~~at the top~~ up to the height of the upper side of the ~~annular disk 49~~ top 23.

Page 17, line 16 delete this paragraph starting with the word "All